# Skills Assessment:

# Conform to specification - Tool Gauge

**Event 2 of 2**

## Criteria

### Unit code, name and release number

MEM15002A - Apply quality systems (1)

\*\*\*This unit sits in the qualifications below – This assessment is not to be amended\*\*

### Qualification/Course code, name and release number

MEM30205 – Certificate III in Engineering – Mechanical Trade (3)

MEM30305 – Certificate III in Engineering – Fabrication trade (4)

\*\*\* Amend the qualification box before distributing to the student. The information here should only contain the qualification the student is enrolled in\*\*

## Student details

### Student number

### Student name

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is your own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Version: *1.0*

Date created: *3 July 2018*

Date modified: *18/10/2019*

For queries, please contact:

*IMRS SkillsPoint*

*Block B Level 1*

*Hamilton Campus Newcastle*

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This assessment can be found in the: [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your skills as would be required to Conform to Specifications within a quality system. |
| **Assessment Event number** | 2 of 2 |
|  | This is a skill based assessment and will be assessing you on your ability to demonstrate skills required in the unit.  This assessment is in 3 parts:   1. Practical 2. Observation Checklist 3. Assessment Feedback |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your assessor for marking.  Ensure you have written your name at the bottom of each page of this assessment.  It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To successfully complete this assessment the student will be available at the arranged time to complete all the assessment criteria as outlined in the assessment instructions.  All parts of the observable task must be performed to a satisfactory level as indicated in the criteria section of the Observation Checklist.  All oral questions must be answered correctly to be deemed satisfactory in this assessment task; however, Assessors may ask questions to clarify understanding. |
| **What do I need to provide?** | Pens, PPE, Completed Tool Gauge from MEM18001C |
| **Due date/time allowed/venue** | *TBA*  Time allowed 2 Hours |
| **Assessment feedback, review or appeals** | Appeals are addressed in accordance with Every Students Guide to Assessment. |

## Specific task instructions

The instructions and the criteria in the tasks and activities below will be used by the assessor to determine whether the tasks and activities have been satisfactorily completed. Use these instructions and criteria to ensure you demonstrate the required skills and knowledge.

If this assessment requires you to record information, your assessor will provide you with an appropriate document/template.

## Part 1: Practical

To complete this part of the assessment, you will be required to participate in a practical demonstration of how to complete a task or activity.

These practicals will be observed by your assessor, or can be digitally recorded and submitted as evidence.

Your responses will be used as part of the overall evidence requirements of the unit.

You should refer to the list of criteria in the Observation Checklist to understand what you need to demonstrate in this section of the assessment. This Checklist outlines the assessment criteria used to assess your performance.

Once completed you will need to submit this assessment and the tasks and activities you are required to complete to your assessor for marking.

**Contingency Management:**

While undertaking this task a number of unforeseen circumstances may arise. The assessor will have the opportunity to question each learner to gather an understanding of how the student will respond to these events. Below is a table with examples of possible questions.

The assessor has the opportunity in the observation checklist to record relevant questions and responses in the table ***“Part 2 Table 2 Additional Questions”***

Table 1 Unforeseen Circumstances

|  |  |  |
| --- | --- | --- |
| Scenario | Assessors question | Acceptable students response |
| Power failure in workshop | What is the correct action in the case of power failure? |  |
| Damage to measurement tools | What do you do if a measurement tool you are using breaks or sustains damage during the task? |  |
| Emergency evacuation | What do you do if an emergency evacuation drill happens during the assessment? |  |

**Task 1: Conform to specification -Tool gauge**

To follow a quality improvement procedure by checking conformance to specification of a Tool Gauge.

A quality improvement procedure involves the Plan Do Check and Act cycle. The following is an example of the quality improvement cycle.

**Plan**

* What is the problem we need to solve?
* What resources do we need?
* What resources do we have?
* What is the best solution to fix the problem?

**Do**

* Apply the action you have in the plan

**Check**

* Clarify the plan
* Have the problems from the plan been addressed.
* Make sure there are no reoccurring mistakes

**Act**

* If all specifications of the job conform then apply the initial plan.

**Task 1: Conform to Specification – Tool Gauge**

**Step 1:**

Refer to the Tool Gauge drawing supplied. Measure and compare dimensions to the manufactured tool gauge against the drawing and assess if the component conforms to specifications.

**Step 2:**

Complete the table below and report on the tool gauge conformance. Place a tick in the appropriate box (correct/defective) and comment on any non-conformances in the Report section by outlining any discrepancies in sizes in relation to the specifications of the drawing.

Table 2: Tool Gauge Conformance

|  |  |  |
| --- | --- | --- |
| Dimension | Correct | Defective |
| All corners square 4 x 90⁰ |  |  |
| Length mm |  |  |
| Width mm |  |  |
| 90⁰ angle |  |  |
| 90⁰ angle depth 12mm |  |  |
| 60⁰ angle |  |  |
| 60⁰ angle depth 12mm |  |  |
| 118⁰ angle |  |  |
| 118⁰ angle depth 15mm |  |  |
| Radius corners 4 x R8 |  |  |
| All burrs removed |  |  |

**Is the component correct Yes/ No**

**Is the component functional Yes/ No**

Report on the components conformance or non-conformance

**Task 2: Develop a quality improvement procedure (SOP) - Tool gauge**

To assess and report on the results of a quality improvement system and engage in quality improvement

**Step 1**

Study the results of Task 1 Conform to Specifications and identify where the quality has suffered and list below. The list is to include reasons why the inaccuracies occurred. The following are examples of probable causes of inaccuracies when manufacturing components.

* Marking out errors
* Quality and setting up of marking out tools
* Not verifying dimensions from specifications

**Step 2**

Using the results from Step 1 write a standard operating procedure that will reduce the frequency of the defects. A Standard Operating Procedure template is supplied on the next page.

**Step 3**

Complete the Customer Request Document (template supplied) if

* The customer ordered six (6) tool gauges.
* Each taking three (3) hours to manufacture including quality check.
* 24 hours material delivery.
* 6 Hours to deliver order after completion of manufacturing and quality check.

Simulated Environment Conditions

***Note: The assessor may direct the student to use different equipment in different spaces to ensure competency is applied in new and different situations.***

The assessment is to be carried out in the workshop complying with all WHS requirements and compliance with Standard Operating Procedures.

The assessment should take approximately 2 Hours.

**Standard Operating Procedure**

**Manufacture Tool Gauge**

**Use this procedure to manufacture the tool gauge and check for conformity to specification**

1. **Drawing Issue**
   1. Check the drawing issued matches the job sheet instructions
   2. Check the drawing has printed properly and ensure all information can be clearly read.
2. **Drawing Interpretation**
   1. Ensure the work area is clean and clear of grease, oil, and any ignition sources
   2. Access well lit areas of the workshop away from hazards to interpret drawings
   3. Identify material type and quantities and match to job sheet instructions
   4. Confirm quantity of finished items required are detailed on the drawing
   5. Ensure all dimensions are taken directly from the drawing or are calculated   
      from given dimensions. DO NOT SCALE from drawing.
3. **Marking out Tool Gauge (check for conformity to specification)**
4. **Manufacturing Tool Gauge (check for conformity to specification)**
5. **Customer Feedback**

5.1 Customer feedback sheet to be supplied with components

5.2 Feedback to be reviewed and changes to Standard Operating Procedure made if required by customer

1. **POTENTIAL SAFETY HAZARDS**

Ensure manufacture of tool gauge is taking place where exposure to workshop hazards are eliminated or reduced.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Potential Safety Hazards/Risks in Workshop Area** | | |
| • | Electric shock | • | Rotating machinery/equipment |
| • | Burns | • | Hot work pieces |
| • | Fumes | • | Sharp edges and burrs |
| • | Sparks & spatter | • | Hot shavings |

1. **PERSONAL PROTECTIVE EQUIPMENT**

If drawing interpretation needs to occur in the workshop then the following personal protective equipment must be worn.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Eye protection must be worn in workshop |  | Long and loose hair must be contained. |
|  | Covered footwear with rubber soles must be worn. |  | Close fitting/protective clothing to cover arms and legs must be worn |

**Customer Request Document**

**Copy to be sent to customer**

**Tool Gauge**

|  |  |
| --- | --- |
| Customer Information | |
| **Date** |  |
| **Customer Name** |  |
| **Address** |  |
| **Phone** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Component Request | | Customer: | |
| **Component** |  | **Delivery Address:** | |
| **Number Required** |  |
| **Manufacture Time (hours/days)** |  | **Order Received/On time** | **Yes/no** |
| **Delivery Time (from receival of order)** |  | **Items Conform to specification** | **Yes/no**  **Signed:** |
| **Components Checked**  **(Conform to Specification)** | **Signed:** | **Damaged Items** | **Yes/no** |
| **Other Information** | | | |
| **Feedback or Remarks** | | | |

## 

|  |  |  |  |
| --- | --- | --- | --- |
| Quantity | Material | Finish | Tolerance |
| 1 | 6mm x 75mm Mild Steel Plate  Blank size 75mm x 130mm | All corners to be square at 90 degrees  Remove all sharp edges | All dimensions +/- 1mm  All angles +/- 2 degrees |

## Part 2: Observation Checklist: Conform to specification - Tool Gauge

The Observation Checklist will be used by your assessor to mark your performance in the skills tasks. Use this Checklist to understand what skills you need to demonstrate in checking a tool gauge for conformance to specification. The Checklist lists the assessment criteria used to determine whether you have successfully completed this assessment event. All the criteria must be met. Your demonstration will be used as part of the overall evidence requirements of the unit. The assessor may ask questions while the demonstration is taking place or if appropriate directly after the task/activity has been completed.

Table 1 Observation Checklist

| Item | Task 1: Conform to specification - Tool gauge | S | U/S | | Assessor Comments (Describe the student’s ability in demonstrating the required skills and knowledge) |
| --- | --- | --- | --- | --- | --- |
| 1 | Follow Standard Operating Procedure (SOP) for the Use of hand/measurement tools to check conformance to specification of a previously manufactured tool gauge |  | |  |  |
| * 1. Wear correct PPE suitable for task |  | |  |
| 1.2 Follow safe practices and housekeeping |  | |  |
| 2 | Complete Step 1 |  | |  |  |
| 2.1 Select appropriate measuring tool |  | |  |
| * 1. Measure item to tolerance specified on drawing |  | |  |
| * 1. Use measuring tools correctly and carefully |  | |  |
| * 1. Store tools appropriately |  | |  |
| 3 | Complete Step 2 |  | |  |  |
| 3.1 Complete the table and report on the tool gauge conformance |  | |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Task 2: Develop a Quality Improvement Procedure – Tool gauge | S | | U/S | Assessor Comments (Describe the student’s ability in demonstrating the required skills and knowledge) |
| 1 | Complete Step 1 |  |  | |  |
| * 1. Study results of the conform to specifications (Task 1) and identify where the quality has suffered |  |  | |
| * 1. Complete list |  |  | |
| 2 | Complete Step 2 |  |  | |  |
| 2.1 Study the list from Step 1 and identify where the frequency of defects can be reduced |  |  | |
| * 1. Complete SOP |  |  | |
| 3 | Complete Step 3 |  |  | |  |
| 3.1. Complete Customer Request Document |  |  | |  |

Table 2: Additional Questions

|  |
| --- |
|  |
| Assessors may ask additional questions to clarify student understanding. List here any additional questions that were asked during this assessment event.  *Record all additional questions that were asked of the student during the assessment event.* |
| **Student Reponses to Additional Questions** |
| List here the student responses to any additional questions that were asked during this assessment event.  *Record the student responses to any additional questions that were asked during this assessment event.* |

## Part 3: Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome - Skills Assessment:Conform to specification - Tool Gauge

### Event 2 of 2

Satisfactory

Unsatisfactory

### Assessor Feedback

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date:

### Student acknowledgement of assessment outcome

Would you like to make any comments about this assessment?

### Student name, signature and date

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***